





## No. 1078784.4

(Please quote this number in all correspondence)

CLIENT:  
Pan Products Ltd.  
PO Box 396  
Dargaville 0340

SAMPLE RECEIVED FROM:  
Pan Products Ltd.

Date: 21.1.15

Attn: Nathan Cottle

SAMPLE DESCRIPTION:  
One yellow/navy fleece shirt PCF1011-FLYE/NA,  
Size S.

Client Order No.:

Client Reference:

2/4

### NZ FORESTY GUIDELINES FOR HIGH VISIBILITY CLOTHING, NZFOA 2012

#### SECTION 3.

#### Fluorescent Background Materials as per AS/NZS 1906.4 : 2010

#### Part 4: High-visibility materials for safety garments.

The colour measurement is not covered by IANZ accreditation

Section 2:- High daytime visibility (Class F) materials.

2.3 (a):- **Fluorescent Colour** (in accordance with appendix A)

Instrumentation used: Minolta Chroma Meter CR-210 (U.V. included)

Geometry: 0°/45° Illuminant: D65 Observer: 2 degrees Port size: 52 mm

**NOTE:** - It is not possible to calibrate in accordance with CIE 51 as per the Standard's instruction.

Number of layers of test fabric: 1

Backing fabric: Yes. Black – reflectance values from 0.37 to 2.67 (over 400 to 700nm)

Results are the average of three measurements

Sample Condition	Chromaticity Coordinates		Luminance Factor
	x	y	Y
*Dry	0.39	0.54	0.93
*Wet	0.39	0.54	0.84

\* - results taken from report no. 13/133AR

### COMPLIANCE WITH AS/NZS 1906.4:2010, TABLE 2.2 AND FIGURE 2.1

**Colour:** Falls within the **yellow** colour space.

#### Luminance

	Dry	Wet ( tested if wet weather gear )
Luminance	<b>Complies</b>	<b>Complies</b>
Chromaticity Coordinates	<b>Comply</b>	<b>Comply</b>

#### Minimum luminance factor

	Orange-Red		Yellow	
	Dry	Wet	Dry	Wet
Luminance: -	0.40	0.34	0.70	0.59



Tests indicated as not accredited are outside the scope of the laboratory's accreditation

L A Greer, Testing Manager  
Signatory

28/01/2015

#### "THIS REPORT APPLIES ONLY TO THE SAMPLES TESTED"

Except where the sample is drawn independently by NZWTA Ltd. NZWTA Ltd makes no warranty, implied or otherwise as to the source of the tested sample. The above test results are not certified due to the adoption of modified and/or non-standard procedures designed to provide THE CLIENT WITH GUIDANCE INFORMATION ONLY. Except where precluded by law, no responsibility can be accepted by NZWTA Ltd for any claim which may arise from any person acting on information contained herein.

New Zealand Wool Testing Authority Ltd

Cnr Bridge & Lever Streets, PO Box 12065

Ahuriri, Napier 4144, New Zealand

T +64 6 835 1086, F +64 6 835 6473 Email: testing@nzwta.co.nz





## No. 1078784.4

(Please quote this number in all correspondence)

CLIENT:  
Pan Products Ltd.  
PO Box 396  
Dargaville 0340

SAMPLE RECEIVED FROM:  
Pan Products Ltd.

Date: 21.1.15

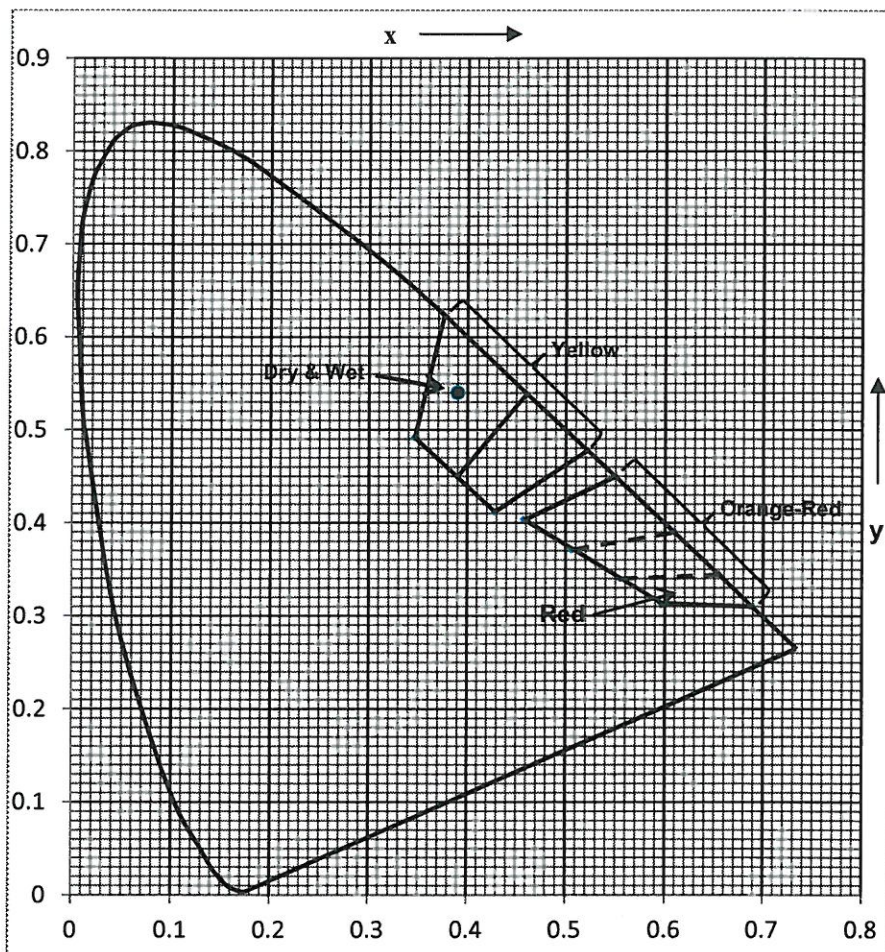
SAMPLE DESCRIPTION:  
One yellow/navy fleece shirt PCF1011-FLYE/NA,  
Size S.

Attn: Nathan Cottle

Client Order No.:

Client Reference:

3/4



**Note:** The specification of the fluorescent luminance factors restricts the use of fluorescent red which, although a part of the total orange red area, must not be used for NZFOA Guideline garments. Additionally fluorescent red will not meet the luminance specified for orange red.



Tests indicated as not accredited are outside the scope of the laboratory's accreditation

*Handwritten signature*

L A Greer, Testing Manager  
Signatory

28/01/2015

**"THIS REPORT APPLIES ONLY TO THE SAMPLES TESTED"**

Except where the sample is drawn independently by NZWTA Ltd. NZWTA Ltd makes no warranty, implied or otherwise as to the source of the tested sample. The above test results are not certified due to the adoption of modified and/or non-standard procedures designed to provide THE CLIENT WITH GUIDANCE INFORMATION ONLY. Except where precluded by law, no responsibility can be accepted by NZWTA Ltd for any claim which may arise from any person acting on information contained herein.

New Zealand Wool Testing Authority Ltd

Cnr Bridge & Lever Streets, PO Box 12065

Ahuriri, Napier 4144, New Zealand

T +64 6 835 1086, F +64 6 835 6473 Email: testing@nzwta.co.nz



Tests indicated as not accredited are outside the scope of the laboratory's accreditation

## Verification Report Guidelines 2012

**Date:** 27/1/2015

**Company Name:**  
Pan Products Ltd.  
PO Box 396  
Dargaville 0340

**Attn.:** Nathan Cottle

**Garment Description:**  
Yellow/navy fleece shirt PCF1011-FLYE/NA, size S.

**Test No.** 1078784.4



**Fabric Colour(s) Tested:**  
Yellow Fleece Fabric

### Test Measurements:

	Luminance Factor	Chromaticity Values	
	Y	x	y
<b>Dry</b>	0.93	0.39	0.54
<b>Wet</b>	0.84	0.39	0.54

### Verification:

The tested fleece fabric in this garment **meets** the specifications for *Fluorescent Colours (2.1)* and *Luminance Factor (2.2)* as set out in the *NZ Forestry Guidelines for High Visibility Clothing 2012*.

This verification report refers to the *NZ Forestry Guidelines for High Visibility Clothing 2012*, which should be read in conjunction with this report. The New Zealand Wool Testing Authority (NZWTA) accepts no liability for any injury or loss of damaged caused by or attributed to the use of this verification report. Further, the NZWTA disclaims all warranties (expressed or implied) that the subject of this report is suitable for a particular purpose, application, or use.

L A Greer, Testing Manager  
Signatory

28/01/2015

### "THIS REPORT APPLIES ONLY TO THE SAMPLES TESTED"

Except where the sample is drawn independently by NZWTA Ltd. NZWTA Ltd makes no warranty, implied or otherwise as to the source of the tested sample. The above test results are not certified due to the adoption of modified and/or non-standard procedures designed to provide THE CLIENT WITH GUIDANCE INFORMATION ONLY. Except where precluded by law, no responsibility can be accepted by NZWTA Ltd for any claim which may arise from any person acting on information contained herein.

New Zealand Wool Testing Authority Ltd

Cnr Bridge & Lever Streets, PO Box 12065

Ahuriri, Napier 4144, New Zealand

T +64 6 835 1086, F +64 6 835 6473 Email: testing@nzwta.co.nz